Modeling of Kutum Fisheries Management in the Iranian Coastal Water of the Caspian Sea

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Abstract: This research is an attempt to study fisheries management of kutum stocks in the southern coast of the Caspian Sea. For this purpose, a Bioeconomics model was developed. Relationships between fishing mortality rates as an index for fishing effort with biomass, yield and profit were studied. The results show that the deterministic sustainable biomass is 25.8 thousands of tons. Moreover, the maximum sustainable yield (MSY) is about 7 thousands of tons and the fishing mortality rate for the maximum sustainable yield, ranged from 0.4 to 0.6. The results also reveal that a rate of fishing mortality higher than 1.3 is very likely cause vulnerability of biomass. In addition, increasing fishing mortality rate to 1.4 might endanger the amount of yield to get under the critical threshold. Some recommendations are finally made for further studies, refinement and implementation of the models.

Abstract only